

WHAT IS CLAIMED IS

1. A foamed polyimide shaped article obtained by molding and then calcining a mixture of pulverized pieces of a pre-foamed polyimide resin mass and a heat resistant binder.

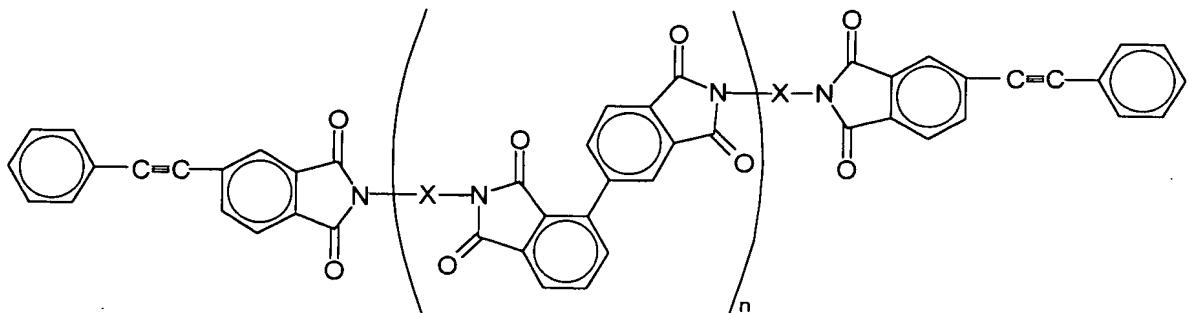
2. A foamed polyimide shaped article as set forth in claim 1, wherein the pre-foamed polyimide resin mass is comprised of a polymer obtained using as an essential component a 2,3,3',4'-biphenyl tetracarboxylic acid component as an aromatic tetracarboxylic acid component.

3. A foamed polyimide shaped article as set forth in claim 1, wherein the pre-foamed polyimide resin mass is obtained using as a diamine component a diamine having two amino groups in a molecule or an amine compound comprised of a mixture of diamine having two groups and ones having three or more groups.

4. A foamed polyimide shaped article as set forth in claim 1, wherein said heat resistant binder is an end-modified imide oligomer.

5. A foamed polyimide shaped article as set forth in claim 1, wherein said heat resistant binder is an end-modified imide oligomer obtained by reacting a biphenyl tetracarboxylic acid, an aromatic diamine compound, and 4-(2-phenylethynyl)anhydrous phthalic acid and having a logarithmic viscosity (η_{inh} , 30°C, 0.5 g/100 ml solvent, solvent: N-methyl-2-pyrrolidone) of 0.05 to 1.

6. A foamed polyimide shaped article as set forth in claim 1, wherein the heat resistant binder is an end-modified imide oligomer of the formula:



(wherein, X is an aromatic diamine residual group and n is an integer).

7. A foamed polyimide shaped article as set forth in claim 1, wherein the heat resistant binder has a melt viscosity at the temperature of use of 1 to 1000000 poise.

8. A foamed polyimide shaped article as set forth in claim 1, wherein the heat resistant binder has a glass transition temperature (Tg) of at least 300°C after calcining (curing by heating) and a flexural strength of at least 1300 kgf/cm².

9. A foamed polyimide shaped article as set forth in claim 1, wherein the heat resistant binder is mixed into the pulverized pieces of the pre-foamed polyimide resin mass at a ratio of 2 to 30 wt%.

10. A foamed polyimide shaped article as set forth in claim 1, having a heat resistance free from changes in appearance after a heat resistance test at 300°C for 60 minutes.

11. A foamed polyimide shaped article as set forth in claim 1, wherein the density is 0.01 to 0.8 g/cm³.

12. A process for production of a foamed polyimide shaped article comprising pulverizing a pre-foamed polyimide resin mass, mixing the pulverized pieces with a heat resistant binder, molding the mixture to a predetermined shape, then calcining it at a temperature of at least 350°C to cure the binder and strongly bond the polyimide foam mass.

13. A process for production of a foamed polyimide shaped article as set forth in claim 12, wherein the heat resistant binder has a melt viscosity at the temperature of use of 1 to 1000000 poise.

14. A process for production of a foamed polyimide shaped article as set forth in claim 12, wherein the heat resistant binder is a polyamic acid obtained using as an essential component a 2,3,3',4'-biphenyl tetracarboxylic acid component as an aromatic tetracarboxylic acid

component.

15. A process for production of a foamed polyimide shaped article as set forth in claim 12, wherein the pre-foamed polyimide resin mass has a density of 0.0005 to 0.1 g/cm³.